

CEA Alliance Best Practices for Indoor Growing in Controlled Environment Agriculture



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CEA Alliance

The Controlled Environment Agriculture Alliance (CEA Alliance) is a membership trade association representing and servicing vertical farms and greenhouse producers growing fruits and vegetables in a highly controlled indoor production environment





What is Controlled Environment Agriculture?

Controlled environment growers employ a variety of agricultural production methods and technology to create optimal growing conditions with rigorous environmental controls.

Growers utilize innovative technologies such as hydroponics, aeroponics, aquaponics, and soil-based systems to grow a wide variety of fruits and vegetables.

CEA producers work to deliver the freshest, best-tasting, and most nutritious fruits and vegetables to consumers, with the least environmental impact; reducing use of water, land and other scarce resources; and employing the most rigorous practices to ensure the safety of our products.



Why is Controlled Environment Agriculture important?

Controlled environment produce has important environmental benefits, including reduced use of water, land and other scarce natural resources.

Indoor growers use fewer or no pesticides, reduce food waste, and reduce carbon emissions from long-distance transportation by locating farms closer to markets.



Grower members



Business Service Members



Powering CEA Yields



Food Safety Guidelines for Controlled Environment Agriculture 2nd Edition

- Growing indoors allows for greater ability to control multiple variables; food safety risk assessment and management are key to deliver the efficiency, quality and sustainability CEA can provide.
- Originally developed in 2023 by the CEA Alliance in collaboration with the International Fresh Produce Association.
- Designed to share food safety knowledge across all CEA growers and stakeholders.



Objectives

- Provide recommended food safety best practices, intended to minimize microbiological public health hazards associated with fresh leafy greens and herbs grown in CEA.
- Addresses areas identified by the food safety working group with diverse stakeholder input from academics, buyers, state regulators and FDA.
- It does not address every know hazard. It is expected that growers are following food safety standards in compliance with applicable regulations.



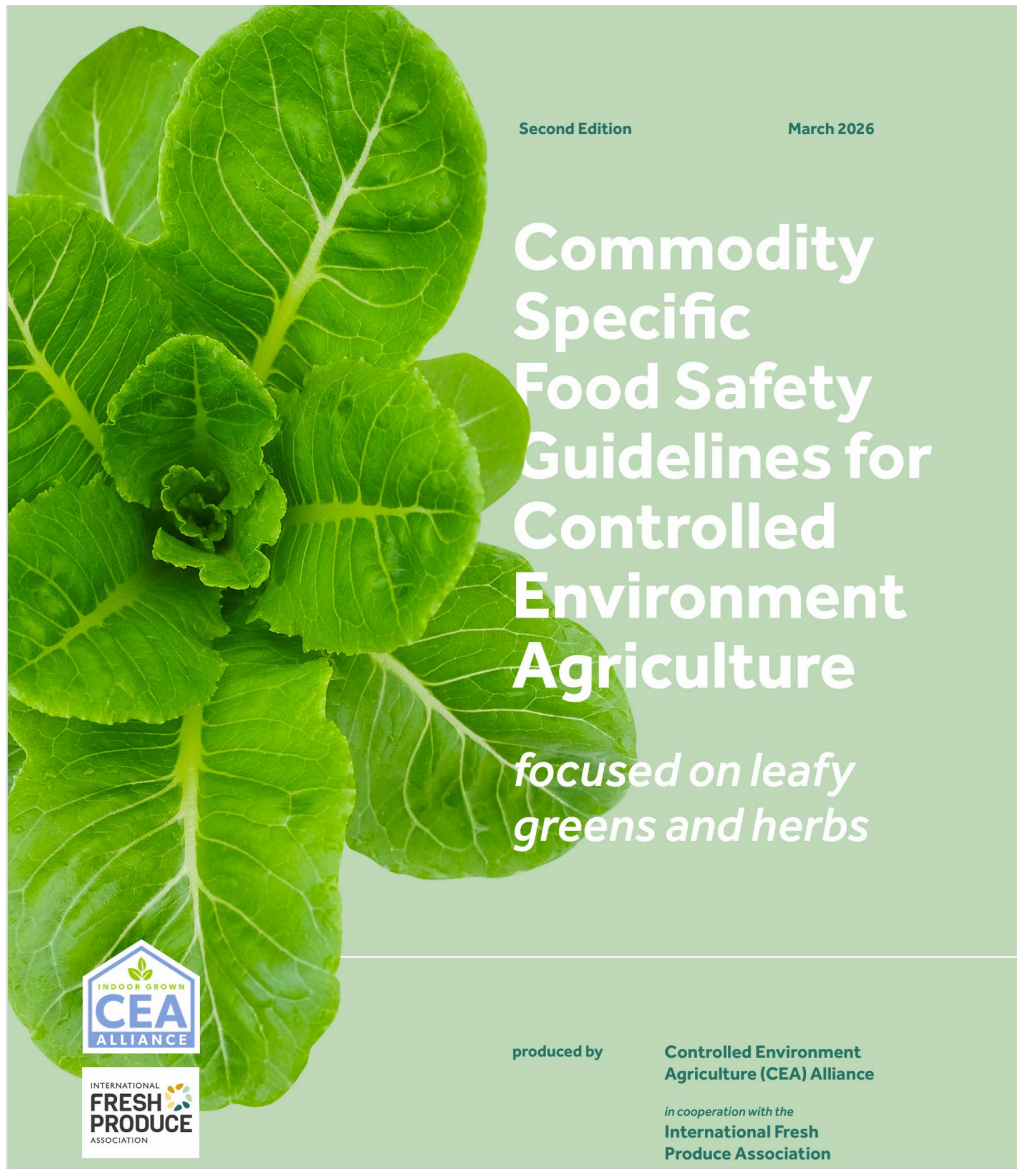
What is covered in the document?

- **Regulatory requirements:** help determine when an operation is a farm or farm mixed-type facility.
- **Worker health and hygiene & sanitary design:** tools to manage the risk of having seed to finished product in the same building.
- **Pest control & Integrated Pest Management*:** CEA growers limit use of pesticides. Use of alternate methods in the context of food safety.



- **Inputs and raw materials:** seeds, substrate, nutrients/fertilizers risk of cross-contamination.
- **Water*:** water storage and delivery systems, treatment, monitoring.
- **Growing:** food and non-food contact surfaces, risk assessment/management grow areas.
- **Harvest:** equipment design and use
- **Pack, storage & distribution:** industry standard
- **Lot Management and traceability*:** lot definition, traceability





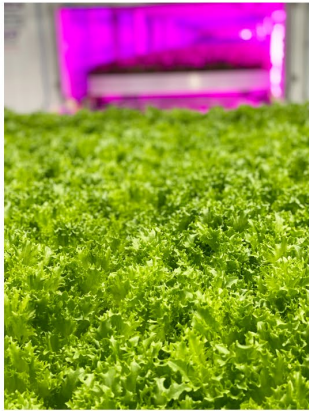
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OUR FARMS



Q&A

